1731 313 the deforestation of the south over a period of centuries thus is related to water spray and wind damage, relationships which a wise administration cannot neglect.

121 The natural tendency is to think in terms of population and land and of the food which it can produce. But if the population is envisaged in terms of forest, the land, both cultivated and uncultivated, and the role of the uncultivated land in protecting the soil, broader understandings are possible.[9]

231 It is a significant fact, to use another example, that goats are tethered and not allowed to graze. They do not roam the hillsides, nor crop off the shoots of young plants. If they did, it is possible that legislation controlling the goat might have to be enacted such as has been done in the island of Cyprus.

311 731 185 It is important therefore, to ascertain how a culture makes use of its natural environment and also how it takes care of it. Typhoons cannot be controlled. Neither can periods of drought which often produce water shortages, prevent the planting of sweet potatoes, or the harvesting of a good rice crop. In areas where control is possible, the Okinawans have developed conservation measures. Almost one hundred years ago, Dr. D. S. Green, Fleet Surgeon attached to the frigate Mississippi on Perry's expedition to Japan, wrote:

175 185

> "Two objects seem to influence the islanders in all their operations, viz: the retention of water or moisture, and the avoidance of surface-washing. To effect these desirable ends, especially in a rolling country, a great quantity of grading is required, besides very deep culture; and here both of these have been done."[10]

000 In the areas studied, no serious sheet erosion was observed.

[Text continues TOP of P. 157 -- Analyst]

9 The general ideas and points of view expressed by Edward Graham in his Natural principles of land use, London, New York, and Toronto, 1944, are pertinent here.

10 Hawks, Perry's expedition to Japan, as cited, II, 26-27. The emphasis is in the original. Green continues with further details of grading around streams, along ravines, and on the uplands. His description today would still fit many parts of Okinawa. He was particularly impressed with the lands on a journey between Nugah (i.e., Nago) and Tanegah, southwest of Unten. His whole passage is well worth reading.

Two other forms of land conservation and maintenance, crop rotation and fertilizers, will be discussed under agriculture.

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Not all of the upland or slope cultivation is done by terracing, as we have seen. Crops other than rice are often grown on hillsides, or up slopes, less often following the contour of the land. The precautions here are also suited to the cultivation: weeds or grasses grow along boundary lines or divide off sharp drops, or small stone fences may be used.

In Nagamo, where there is no rice grown, there is little water from these sources. It comes from rainfall and amounts of sugar cane and sweet potato that are grown depend on its quantity and regularity. Water regardless of crop is a constant problem. [312]

In Okinawan agriculture, constant fertilization is necessary. There are too many people to leave land fallow in ordinary times. Each plot must be used if the farmer has the time and energy to do so. Since the island is in a humid subtropical climate, the organic materials in the soil (humus) are quickly oxidized. Porous soils encourage the leaching of minerals from the top soil, especially with torrential rains. The fewness of domestic animals increases the dependence on plant residues and artificial fertilizers. One of the commonest complaints of the Okinawan farmer, in addition to the poorness of his soil and crop damage from typhoons, is that it must be unceasingly fertilized. It is a treadmill. He must walk fast to stay in the same place. [134] [231]

There is very little difference in the use of fertilizers in the communities studied. Fertilizers most frequently used are:

(1) Composts. A typical mixture (though there are many combinations) may be composed of dried miscanthus, or any kind of grass, ashes and cinders, perhaps some pieces of charcoal, and goat droppings. This is left a month outside in a pile and put on the fields and hoed under.

(2) Plant residues. These are put on the soil, both of paddy and dry crop land, and hoed under. Plants are the greatest single source of fertilizer. The cut over rice plant is turned under in the paddy field. Tops of the sweet potato, if not used as slips or for food for animals, miscanthus grass, and burned rice hulls are other sources of fertilizer. [824]

(3) Animal manures mixed usually with pen grass. Animal fertilizers are not abundant, an indirect effect of the war which greatly reduced the number of horses, cattle, pigs, goats, and the smaller domestic animals. When available, goat, pig, or horse manures are used. Pig or goat pen grass is gathered up and spread on the fields. Pig manure is the best source of animal fertilizer, for pigs are the most numerous of the larger domestic animals. [727] [232] [231]

(4) Night soil. The use of night soil, called jinpun in Okinawan, has declined from pre-war times. It is often said that it is not used at all. But this statement must be qualified. It is [514]

1: Glacken E-5 (1951-1952) 1953 AC7 Okinawa AC7

occasionally, but by no means universally used. This failure to use night soil may vary from locality to locality, and from farmer to farmer. In my opinion, it has not the importance it has in China and Japan. Neither is night soil used as a food for pigs, though this seems to have been the case in some parts of Okinawa as late as the 1920's.[2] But feeding human faeces to pigs was not observed in any village.

Normally in certain parts of Hatsuda, night soil is used, though infrequently, in places near the house. It is not carried far. Applications are made to cultivated land and land not presently in use. In the Nagamo area, it is occasionally used on sweet potatoes and sugar cane. Night soil, gathered from the outside toilets, is allowed to dry out before being applied to fields. It is often placed around ornamental plants. The fresh liquid form, carried on the shoulder in two buckets on either end of a long pole, may be applied directly to the fields, ladling out a little of the liquid around each plant. The professional collector of night soil is uncommon in the areas visited. Only one instance was found. Two brothers, who hired themselves out, cleaned the toilets for Yen 130 per day, plus meals. They spread the night soil on the owner's fields. These two brothers served the Gushichan area.

In Hanashiro, night soil is used occasionally, and then, it was said, only by the old. Its main use was on sugar cane. As a general rule, in all the villages, night soil is most frequently used around plants already growing and around each plant individually, rather than mixing it with the soil when the field is being prepared. Its use on rice fields was not observed.

The sparing use of night soil is indicated also by the infrequency with which one meets its characteristic odor in the countryside. An observation of a traveller, almost 100 years ago, lends some credence to the thought that night soil has not been extensively used in Okinawa. "How night-soil is disposed of is not known; certainly it does not obtrude itself on the senses, as it does in China, nor is it applied in the same way."[3] In Hanashiro, the decline in use since the war was ascribed to American influences: the dangers to health, and the increased availability of artificial fertilizers.

(5) Commercial fertilizers. These are now substantial proportions of the expenditures of an Okinawan farmer. These fertilizers generally are broadcast over the rice and dry crop lands. The writers of a

2 Richard Goldschmidt, Neu-Japan, as cited, 135.

3 Hawks, Perry's expedition to Japan, as cited, II, 35. The author was Dr. Green.

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221

Rotation #2, Matsuda

First year, ninth month: Autumn planting of sugar cane
Second year, twelfth month: Harvest of sugar cane. Followed by: Soy bean, sweet potato, or vegetables.

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Land is seldom allowed to lie fallow intentionally for any length of time. At any one time of the year, a farmer may have idle land for which there may be a variety of reasons. He may have other tasks and be unable to cultivate all his land, or have no need of doing so, or some of his land may be so poor that he will not cultivate it unless necessary. Much depends on the individual farmer and his holdings. The village records indicate that in Hanashiro 97.2% of the rice and 83.1% of the dry crop land is under cultivation. From the preceding discussion of land classification, it is clear that many parcels are of marginal quality, and these areas may be left uncultivated, at least part of the year. During the post-war [426] period there has been some informal lending of land, free of rent, to friends and neighbors, if the farmer is not using it himself.

24
[231]
[227]

Manual labor with hand tools is the dominant method of cultivation. Domestic animals are not uncommon, but their use in farming is minor. The war increased the dependence on manual labor through the loss of domestic animals. Only cattle are now used in rice cultivation for plowing and harrowing and this is infrequent. The man or woman and the hoe are far more common. Crops are carried from the [482] fields by human labor. The basket or the straw container, or the [415] tied rice sheaves on either end of a pole over the shoulder, and not [493] horse carts, push carts, or wheel barrows are the main means of transport from field to courtyard. The barefooted farmer, with his hoe and a pole or a basket does the greatest part of the work. The common tools of agriculture are hand tools and adapted to the intensive cultivation which so often has more properly been called the work of a gardener rather than that of a farmer.

412

The basic all purpose tool is the solid bladed hoe. The hoe, since deep cuts are possible with its heavy blade, takes the place of the plow. The hoe also replaces the spade, and even the rake, for it can be used to break up and smooth the soil. A poorer farmer may lack [434] many of the tools in the following list, but he will have two or three of the solid bladed hoes.

The accompanying illustration shows the most common agricultural tools:

1. The hera, a spatula or trowel, used for transplanting tops of the sweet potato. Its wooden hand grip curves toward the end of the tool. The hera is also used as a scraper to remove brown sugar from the sides of the cooking pans during the sugar making season.

2. The kama, a small sickle. Next to the hoe, it is the most

243 by plowing.

There is water on the land when it is dug and harrowed, but it is not flooded. Not all rice land is harrowed. If it is not harrowed, the same result is accomplished by further hoeing. The harrow (magusa in Japanese, maga in Okinawan) is partly a home made tool and looks [407] like a large clumsily constructed rake. Essentially it is a piece of timber with a row of strong spikes. This timber ordinarily is made of pine, but other woods may be used. Twelve nails, spaced at about two inch intervals, are driven into the board. These nails or spikes, [414] about 8 sun (almost 10 inches long), square at the head, and with a [326] sharp point, are made by a blacksmith for about Yen 20 each. The [231] harrow is drawn by cattle; two shafts, with a yoke over the animal's [435] head complete the simple implement. The plow is used in the preparation of the field, but far more commonly, the work is done with a hoe.

In the fall and winter planting of rice, the seedlings remain in the seed bed for about 40 days. In the summer, the period is only 20 days and may be less. The winter shoots are from 7-8 inches long, the summer shoots from 4-7 inches. The length is important, for if the seedlings are too long, losses in transplanting will, according to Hanashiro farmers, increase to almost half. In rare instances, due to adverse conditions, seedlings in the seed bed reach 15-20 inches in length. The losses here are said to be considerable in transplanting.

[462] The hoeing or the plowing and harrowing of a field is almost exclusively done by men. It is tiring, uncomfortable, and heavy work. It is much more common to see women hoeing the dry crop land. But transplanting is done by men, women, and the older children. A handful of seedlings in the bed is pulled out and bound with straw, grass, or a rush. There is a knack in pulling these out. They must be jerked quickly, but dexterously to avoid root damage. The bundle is tossed either into a central place or into the paddy field to be planted, if it is adjoining. In the latter case, the bunches are tossed to various parts of the paddy.

243 804 The seedlings are generally set out in rows. For this purpose, a string with small markers like buttons (shirushi) is used. These are 7 sun (about 8.4 inches) apart. Both the rows and the hills are 7 sun apart. Differences between rows and hills may vary considerably. In these localities, the distances were generally the same. The string is stretched from one end of the row to the other. Each seedling is planted at the interval indicated by the marker on the string. This method of planting is not universal. When there is little time, the seedlings might be scatter planted.

243 804 413 Another method of obtaining the checker-board pattern is by means of a home made hexagonal frame, the waku (literally, a reel or a frame). Each of the six sides is divided into nine squares, 7 sun on the side. The overall length is over six feet. The frame is set along the outside border, or at any desired starting point. When in place, the

Rice may also be polished by the use of rude wooden mallets. These have a handle about 3 feet long and a head about 1 1/2 feet long. Rice is placed in a mortar with straw on top. It is pounded, often by two or three women swinging alternately. After the hulls are removed, the rice is winnowed, and put back in the mortar until a rough polish is secured. 252 [412]

Uses of rice. Every part of the rice plant has a use. The stubble, left in the ground, becomes a part of next season's fertiliser. The chaff and waste dust (nuka) is saved for pigs, cows, and other domestic animals. The hulls often are used for fertiliser, before or after burning. Rice straw has a variety of uses. The most frequent and important of these is for making rope. 824

After threshing, the straw is dried two or three days. Three or four stalks of about the same length are taken and rolled between the palms. The lower palm, usually the left, is open and up. The right palm rolls the straw into a twist. As the rope grows, new stalks are inserted one at a time, and, when needed, a new length of straw is added. This is not a strong rope, but it has a variety of uses, such as tying down the grass thatch to the roof poles, children's swings, and clothes lines. Mats and pads shaped like a life saver and used to set the sugar pots on after the sugar has been boiled, are made out of rice straw. Another use is in the making of the Ōda (Okinawan). This is a mesh about one foot wide and two feet long. There are loops on each corner. The end of a pole may be inserted in these loops when gathered together. The pole is carried over the shoulder, and sweet potatoes, straw, or other articles may be easily transported. Simple brooms without a handle, little more than a bunch of straw tied together in three places are also made of rice straw. Twisting and braiding rice straw is likely to be rainy day work. These articles are most often made twice in the year, corresponding with the harvests. [283] [285] [482] [417]

At typhoon times, if rice is not completely destroyed, the damaged rice may be used for pig food. The preparation of this rice is woman's work. The rice is put in a mortar and pounded with a mallet in the manner already described, although a single operator usually does the work. [731] [231] [462]

Types and preferences. As a general rule, the selection of varieties of rice for planting depends on taste, the nature of the soils, and individual judgment of the expected yield of each type. In Matsuda, it is estimated that about one half of the rice is the Formosan variety, Taichu 65 (Taichu rokujugo), in Okinawa known as horai. Another variety, Kunigami Ji (Kunigami ichigo) represents about one-fourth of the crop. Hochigome (akaho) takes up about another one-fourth. This glutinous rice has a brown reddish rust colored kernel and is used for rice cakes. A fourth variety, horai-mochimai, is also well liked. No black rice is grown here. 243 [262]

244 [132] months. The amount of sweet potatoes grown is not closely related to the season. It depends much more on rainfall.

[031] [131] The effects of typhoons on the plant are most noticeable after transplanting. Salt water spray shrivels the transplants up and they die without developing. These conditions are more noticeable near the seashore in areas like Nagano that lack trees and tidewater shelters.

824 Like rice, all of the sweet potato plant is used. Plant residues are turned under to fertilize the soil. This turning under of the vines or their use in composts is a doubtful blessing if the plants are diseased. The good potatoes are reserved for human consumption. [231] The poor or the diseased ones are mashed up in a stone mortar with a long pole, used like a pestle, for pig and goat food. Besides using the tops as slips, women constantly cut them off for fresh greens for the pigs. [262] The sweet potato is the basic food because it is cheap, can be grown the year round in lowlands and uplands, and can be cultivated by all members of the family. As pig food, it is a means of inexpensively raising animals which later have cash value. [462] The feeding and care of pigs is usually one of the incidental chores of women.

294 184 The varieties most commonly found in these Okinawan villages are the Okinawan #100 (Okinawan no hyakugo) and varieties known locally as the bentō, a small round tuber, and the bokuto. The two chief differences between the northern and southern villages in cultivating the sweet potato are (1) the two and three pronged hoes are much more in evidence in the north. With practice, they can be used advantageously in quickly weeding a plot while not cutting the potato itself. (2) Matsuda appears to be less dependent on the [262] [231] sweet potato as a human food. The farmer here has more rice for himself and a greater proportion of his sweet potato crop goes for animal food.

6

The Planting of Sugar Cane and Sugar Making

249 Sugar cane (kibi) is grown on dry crop land, its rows often alternating on the same plot with the sweet potato. Cane may be started with cuttings, or it may be a second growth (ratoon) from the stubs of the old plant after it has been cut down for crushing. Cuttings may be purchased or selected plants from another planting are used. The slips are cut to leave three buds. These cuttings may be planted in three ways: (1) all horisontally, (2) horizontally with the cutting which comes from the topmost part of the stalk planted slantwise, or (3) all cuttings may be planted slanting.

The soil must be thoroughly worked with the ever present hoe. Plowing and harrowing are rarely done. The earth must be thoroughly fertilized. In addition, small amounts of compost may be placed under the cutting, and less often liquid night soil might be used.

824 [262] [432] [462] [494]

Soy beans have three main uses: soy sauce which is seldom made in the home, bean curd (tōfu) and miso, a bean paste, both always home made. For this reason, soy beans are grown mostly for home use, with the surplus sold. In Hanashiro, where the surpluses are greater, the beans may be sold in Naha, Shuri, or Itoman. Women do the selling, taking the beans to market on the buses, trucks, or three wheeled vehicles.

241 262

(2) Other types of beans such as the red dwarf bean (azuki) (Phaseolus angularis Wight), the kidney bean (ingen in Japanese, Phaseolus vulgaris L), the broad or horse bean (soramame in Japanese, Vician fabia L), and peas (endō in Japanese, Pisum sativum L) are grown for home use, usually in parcels which are closest to the house.

[263] [252]

(3) The giant radish, (daikon in Japanese, Raphanus sativus L) is, after the soy bean, the most important of the minor crops grown for home use. This is the vegetable most favored either as a condiment, or as a side dish. It is eaten sliced raw, pickled, or fried in stripe in soy sauce. When eaten boiled, its flavor resembles that of a turnip.

(5) The pumpkin (Cucurbita pepo L) called nanka or kabocha, the latter name being derived from the word Cambodia from which the pumpkin was introduced into Japan. They are harvested in summer, and one crop a year, generally for home use, is grown. If the flesh [231] becomes too ripe and turns reddish and sweet, it is not relished and the pumpkin is fed to the pigs.

(6) The cucumber (kiuri in Japanese, Cucumus sativus L) is a very minor crop. In none of the villages were they generally grown, and then only for home use.

(7) The hechima or tōgwa in Japanese, subui in Okinawan.[7] This is very large and cylindrical. In exceptional specimens, its outward appearance is indistinguishable from the water melon. Its flesh is [184] white. In the two southern villages, the tōgwa is grown very sparingly. In Matsuda and the surrounding villages, it is more common. Here it is used to fill in during times of food shortage. Some specimens I have [221] seen weighed over 100 pounds. It is planted after lunar New Years, harvested in the 6th or 7th lunar month, a period reaching from about January to May. From April to July, when other vegetables are scarce, [252] it is often used as a substitute. The flesh when boiled is rather tasteless; it is commonly boiled and served with chunks of meat. The tōgwa, in the northern villages, is often stored in dark cool places [251] away from the sunlight, often under the house. If not cut open, the melon can be saved for a year.

7 I am not certain whether this is Luffa cylindrica Roem, Luffa petola, Ser, the Luffa sponge, rag gourd, etc., whose pulp disappears when ripe to be replaced by a web of fibres.

1: Glacken E-5 (1951-1952) 1953 AC7 Okinawa AC7

Domestic Animals

231 [727] The effects of the war are still to be seen in the scarcity of domestic animals (kachiku). The domestic animal population is increasing. Horses were far more numerous before the war. The same is true of cattle and oxen which, however, are more numerous than horses. All are used as draft animals, with the greatest frequency in Hanashiro. Cattle and oxen are used for plowing and harrowing in the rice fields; horses for pulling carts and wagons. Horse meat is not eaten. All larger animals are tethered or in stalls. They are not allowed to graze or to roam freely around the villages or on the hillsides. Since each bit of land is owned, grazing would deprive someone of needed grasses, either the young shoots or the matured fibres. Chickens are generally kept in coops. Ducks have a little more freedom. [492] [267] 235

231 235 DOMESTIC ANIMALS

Animal	Hanashiro	Nagamo	Minatogawa	Matsuda
Cattle and Oxen	40	5	0	1 (80)
Horses	2	1	0	20 (90)
Pigs	125	100	150	315
Goats	50	50	40	321
Chickens	a/	30	a/	706
Ducks	0	50	a/	10
Rabbits	0	0	0	6

Source: Village clerks of each village and township records. Figures are approximate as of January 1952. Pre-war estimates where known are shown in parentheses. Villages try to keep an accurate and up to date animal census. a/ Not available, village has some

231 In all the villages studied, pig raising is the most important secondary occupation of the individual farmer or fisherman. Pig raising is old in the culture. According to Chamberlain (1895), under the old kingdom every household by law had to raise goats and pigs. Pigs were fed in part on human excrement. This practice in my observation has now been abandoned.

[434] Pigs are raised for sale. They are the most significant single source of cash for the farm family and they supplement the fisherman's cash income.

231 ●

cash income. Pigs are seldom eaten by the family that raises them. On New Year's, a family will slaughter a pig or three or four families might co-operate in sharing one. Pork may also be served at O-Bon and at Jūgoya, the autumn equinoctial holiday season. [262] [527]

A family often gets its start in pig raising by obtaining a loan from a mutual loan group. (These groups will be discussed later). A young pig may cost about Y2000. Male pigs intended for market (nikubuta in Japanese, shishiwa in Okinawan) are castrated two months after birth. Keeping breeding pigs (tanebuta) is a special business. Men engaged in this business bring the boar to the pig raiser's home. Each village has such a businessman or at least has convenient access to one in a neighboring village. The fee usually charged is Y200. If the first attempt at breeding is unsuccessful, a second opportunity is given free. On the third try, the dealer claims his fee again. In Katsuda, there is a belief among the old that as the tide is coming in, if a sow is in heat, the male will be able to perform, but that in the ebb tide he cannot. [426] [435] [232]

Great care is taken in housing pigs adequately, if the family is able to do so. The pig sties made of stone or coral may be better than the houses of their owners. This is by no means so shortsighted or ridiculous as it might seem. Pigs are the means, one of the very few means, by which an agricultural family may acquire substantial sums of cash. To protect this living bank account, considerable sums are invested in fine stone, or cement floors and an adequate roof. The pen must be strong to withstand typhoons. With a good pig pen, a sow, and a good litter, a family can look forward to improving its financial condition and its own housing. There is great variety in the quality of pig pens. The pen may be in combination with the outside toilet, but with the two places completely separate; it may be part of a larger shed which also houses the goats, the cattle, or the horse. If a family can afford it, the pig is housed in a stone pen with stone floors, or with other sturdy materials. 231 343 [434] [511]

The day to day care of pigs is mostly the work of women. While the husband is at work in the fields, the wife, as an incidental part of her duties, goes to the nearest plot to cut sweet potato tops, or mashes sweet potatoes in the stone mortar in the compound, often with her infant child on her back. There are three favorite varieties of food for pigs: (1) the leaves of the sweet potato plant not suitable for human consumption or not needed for transplanting, (2) the potato itself. The poorer grades of potato are put in a stone mortar and are smashed with a long pole, or pestle. (3) A cloudy liquid consisting of the sweet potato, waste bean curd (tōfu no kasshu) and water. This is always given warm. The pig may also get poor rice, or rice spoiled for human consumption by submersion as a result of a typhoon, or miscellaneous left overs from the table. 231 824 [462]

There are no ceremonies in any of the villages associated with slaughtering the pig. Villagers seldom kill their own except on 231

231 special holiday occasions. Pig killing or the killing of any animals [825] is distasteful. The pig generally is driven out of the pen to a [943] waiting truck or horse cart and hauled squealing off to market.

232 Considerable interest is being shown (early 1952) in the scientific [197] breeding of pigs from stock imported from the United States. Chester White is a well known word among the farmers of Matsuda. In this area, regional meetings of pig breeders and raisers from the northern part of Okinawa and the Motobu peninsula are held to discuss the care, breeding, and marketing of pigs. These farmers have come a long way from the earlier days, even 25 years ago, when the toilet and the pig pen were the same. A farmer going from one of his fields to another often stops home to look at the pigs and perhaps to discuss his problems with [474] a friend. In Matsuda, a pig growers' association has now been started.

231 Domestic animals, especially the pig, can be expected to increase and to reach at least their pre-war level, if the villages studied are typical. This development will be all to the good. The pig consumes food not fit or not used for human consumption. It does not compete with humans for food. It is unlikely that land now devoted to the production of human food would be diverted to animal food. In my observation, there is not a strong competition between animals and man for the products of the land. Domestic animals really round out the agriculture and consume food that otherwise would not be used.

[311] The lack of grazing land, except on the hill sides and summits, means that domestic animals must be fed with food grown and prepared and fed to them by the farmer. Grazing also would be out of the question since the land on the hills is privately owned and split up in small parcels. The young plants are valued too highly to permit indiscriminate grazing.

[435] Goats are cheaply raised. The only expense is the labor of getting leaves, grass, and tender shoots from the family's genya [262] land on the hills. In the market, goat is the cheapest of all meats. There are also sharp differences in taste among villagers for goat's meat. The milk is not used as a food. Goats are tied up or kept in stalls for their entire life. They are never allowed to roam through the village or to graze on the hill sides. They are not given water and depend entirely on the water in the grasses and shoots which they are fed.

Horses, cattle, and oxen are fed grasses, mashed sweet potatoes, and waste bean curd. Though occasionally used in rice fields, the [492] chief use of horses is in drayage. In Matsuda, the horse and the two wheeled cart make frequent trips to the mountains to transport the longpoles, firewood, and charcoal.

235 Chickens are fed anything that might be on hand. Often they [262] are given the chaff from the rice or the rice that is blown off in winnowing. Occasionally chickens are eaten, but they are kept primarily

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8

Daily Life of the Fishing Village

Fishing families may have informal gatherings toward the end of the day. On a late summer afternoon, the family may sit in the open doorway of the house, for hedges, fences, the barriers, and trees are rare. The wife may be nursing her naked child. Her husband, a fisherman, has changed into his indigo blue and white striped kimono, a tall, broad, deeply tanned man. Next to him sits his mother, over 70 years old, her hands tattooed, as are those of all the old women. She is wearing a kimono of the same color, but of a dot pattern. They sit on unrolled mats. On the veranda, three or four men, unwashed and still in their work clothes, discuss the events of the day. A lacquer tray with tea cups is on the floor near them and the tea (as it so often is) may be cold. There is brown sugar to eat along with the tea. The grandmother may be economically smoking a half or a third of a cigarette in the typical Japanese pipe. As it grows later, the wife gets up, pours some water in the stone mortar, and smashes the sweet potatoes with the long wooden pole. The men continue talking for a while, then take their leave. The wife, her work at the mortar finished, goes into the dirt kitchen to start the evening meal.

The wife of the fisherman has worries that do not bother the farmer's wife. There is always the danger that her husband, or son, will not return, a real possibility, of which the frequency of widowhood in Minatogawa is proof. Every season, there is at least one instance of a fisherman who has either been lost, or whose delay in returning has provoked intense worry. If crews are still out when an unexpected storm arises, there is considerable tension in the village. Since the war, rescues at sea are more likely than before. The village headman quickly reports overdue boats. The American forces have created much good will in seeking fishermen lost at sea.

Women, on the other hand, have opportunities for leisure when the catch is light, or weather is unfavorable. At these times, they can busy themselves with other tasks, in the field, gathering stones, getting miscanthus, but they do not have the unremitting activity of the woman in the agricultural village. There is more visiting during the day than one observes in an agricultural village.

The fisherman, with or without land, tries to keep pigs and perhaps a few goats. In Minatogawa, the pens are often made of sandstone quarried here. Not only the floors and the sides, but the stalls are made of this material. One reason for this is the openness of the village and the danger that pigs will be killed in a storm. A typhoon may carry away the house, its owners having gone to the stronger house of a friend or relative, but pigs are an investment and an asset to be guarded.

843 pregnancy are also said to be rare, although miscarriages in later pregnancy up to two or three months before the birth are more numerous because of the continuing heavy work of the mother in the fields. The mother in the agricultural village normally works up to the time for
849 the birth. She eats her normal diet. After birth, the child is placed on a large comforter (futon) beside the mother.

The midwife, after delivery, goes once a day for a week to the mother's home. Her fee is not decided upon before hand, but according
[846] to custom, averages ¥350 for a normal and ¥500 for a difficult birth,
[965] a low fee probably enforced by the poverty and lack of cash of farm families. (In Naha corresponding fees are said to be ¥1-2000).

There is no uniform way of feeding the child after birth. In
853 most cases the child is not breast fed until after the third day due to the fact that mothers have little milk at this time. The first, second, and the third days it is fed warm water with small amounts of white sugar, but this is by no means universal. Some mothers have said that they give the child the breast 4 or 5 hours after birth. In any case, the child very quickly becomes accustomed to feeding at the breast, and this continues for an indeterminate period, depending on
[862] the mother and the child. It may be for two years, or until the next child comes. In all communities studied, other arrangements are made in the unlikely event that the mother does not have milk of her own. The child may be given evaporated cow's milk or friends or relatives nurse the child. In Minatogawa, if a woman has special duties or takes a trip out of town and cannot take her child with her, she can pay to have it nursed.

843 One belief regarding pregnancy still exists among the old in the Ginoza area. If a new house is being built during the pregnancy of the woman of the house, the cap of the roof is not put on until after the birth has taken place.

2

Birth Customs and Convalescence

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849
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[184]
[189] In Minatogawa, and to a much lesser extent in Hanashiro, birth customs are related to certain beliefs about the pig pen. These were not known in Hatsuda. In the two southern villages they have virtually disappeared, except among the old. According to a Hanashiro farmer's wife, the child on the day of its birth is washed, dressed in new clothes, and carried to the pig pen, which is supposed to frighten away evil spirits (bakemono).[1]
[See footnote 1, bottom of p. 257--analyst]

away evil spirits (bakemono).[1] From the pig sty the child is then taken to the kitchen, where a pot of rice has been cooking. Soot from the outside of the pot is taken up with the middle finger of the right hand and a round black spot pressed on the forehead above the bridge of the nose between the eyebrows. The reason for this could not be ascertained.

Beliefs in the power of a pig sty to ward off evil spirits are still held in Minatogawa and the customs were generally practiced up to the beginning of the war. But these beliefs were related more to celebrations following the birth of the child than to the birth itself. The elements of these beliefs seemed to be that the afterworld was close to this world. If a child were not protected, the spirits of the afterworld would steal the child and take him back. The party celebrating the birth lasted a whole week, usually starting each evening about 8 and ending at 8 the following morning. Guests stayed up all night to prevent the child from being stolen, for if anyone went to sleep, the spirit would enter. Spirits followed behind the guest and were especially dangerous after 10 at night. The spirits however were frightened by the pigs; guests arriving during the danger hours went to the pig pen first to scare off the spirit following them, before entering the house. There was no evidence, in the parties I attended, of any present observance of this custom by young parents. The week of all night parties is no longer held.

These beliefs were found in Minatogawa. Hanashiro informants had heard of such customs, but were vague about them. While their seeming absence in Matsuda may be due to incomplete data, there may be another explanation. These beliefs may have been picked up by fishing people from other sources.

One other birth custom known as jiru belongs to the recent history of the island. Jiru, as explained in Chapter V, is a fire place sunk in the floor of an Okinawan house, often in the corner of the dining room which adjoins a hall or a sleeping room, and near the kitchen. Convalescence was called jiru because mother and child warmed themselves by the device. Today convalescence may be called jiru, though it has nothing to do with the old custom, which in the literature has been referred to as "roasting."

1 When I discussed this and the following beliefs relating to pigs with people in Matsuda, they ridiculed them and said there was no truth in it, implying that people in the south did not know what they were talking about. Subsequent rechecking convinced me that this was not so and that the beliefs in Minatogawa represent differences in the rural culture.

1: Glacken E-5 (1951-1952) 1953 AC7 Okinawa AC7

13

Home Industries, Arts, and Crafts

438 Home industries, arts, and crafts are not a conspicuous part of the life of the villages studied. Even before the war, home crafts, training in dancing, singing, landscape gardening were not cultivated to any degree.

252 Certain foods, like bean curd and bean paste, are made in the home. There is a standard method of preparing bean curd. The soy beans are soaked until soft and then mashed in a hand operated stone mill or quern. This mill has two round stones. The top stone, turned by hand, rests on the stationary bottom stone. The crushed beans, thinned by frequent dashes of water, ooze out of the space between the two stones. This liquid is collected and strained through a cloth drawn over the top of a frame box. The residue in the cloth is saved for pig food. The liquid is boiled. After it curdles, it is strained. The curds remain in the cloth, the liquid [231] is also used for the pigs. The curds, of the consistency of a soft cottage cheese, are wrapped in a cloth and put in the frame box. A tight fitting lid is put on the box and pressed down hard to expel the rest of the liquid. After the curd has been thoroughly pressed, the frame box is turned upside down, the curd taken out, and the cloth wrapper removed. The smooth mold can now be sliced. It is a common sight to see women operating these mills in the villages before a family celebration or a public holiday. Bean curd, fried, [504] boiled in a soup, or in a mixture with vegetables, or as an ingredient of sukiyaki is always served at a party.

25 Bean paste (miso), an even more important food, is also made
252 in the home. Most families serve bean paste soup (misoshiru) every
[264] meal every day. It has four basic ingredients: soy beans, rice (or barley), salt, and water. Recipes differ considerably among families. In one recipe, 8 sho of rice are boiled, after which it is spread out on a large flat basket to drain, and then placed on a mat and allowed to ferment for about one week. An equal amount of soy beans, crushed in a stone mortar, is mixed with the rice. Salt (about 7 go, one go being 1/10 of a sho) is added and the mixture is boiled.[8] The salt retards fermentation and is a preservative. If obtainable, an American hand food grinder is preferred to the mortar and pestle. The mixture is put in a large jar (tsubo) which is placed in the kitchen or in a storeroom and allowed to stand at least a year, sometimes for three. With age, the paste becomes sweeter and is considered to be better. A woman may make three large jars of bean paste 3 times a year, the frequency depending on the size of the jars. Some are 5 1/2 feet high. Occasionally the cycad is an ingredient of miso. Every house has a supply of bean paste. When ready for use, it is very soluble in water.

[804] 8 A koku equals 10 to equals 100 sho equals 1000 go, 47.96 US gallons liquid, 5.12 US dry bushels.

Children do
915 not use household equipment in their games. Instead they find broken
857 dishes, old cans, and other discarded items in the trash heap.

354 The kitchen has no equipment other than the open fireplace with
[716] three hearth stones and a shelf above it on which a salt column, sym-
[654] bolizing kitchen deities, is kept. During the last few years, the Ryukyan government Home Extension Service has been trying to introduce brick stoves into farmhouses. Several families now have this kind of stove although it is expensive to build.

356 As far as can be superficially discerned, the home is kept clean. A visitor usually finds the floor of the house free of dirt. Footgear is taken off before entering, and children are reminded to wash their bare feet before going into the house. Less care is given to the area around the kitchen.

312 Outside the kitchen stand one or two jars to store water. A dipper is
415 kept nearby, and children playing in the vicinity or adults often walk to one of these jars for water, which they drink out of a dipper. There may also be an array of pots, pans, crates, baskets, and other equipment piled up around the kitchen. Knives and hatchets are openly left around among the equipment behind the kitchen.

351 The courtyard is an important place for domestic activities. Here
[541] women and girls wash dishes, mix pig food in large kettles, make bean
[514] paste in a hand stone grinder, and prepare grain for storage. There are
[364] vegetable patches in one corner of the yard, chicken coops, pigsties, goat pens, and an outhouse in another. Most garbage is fed to the pigs; the rest is thrown over the sea wall to roll down onto the beach.

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Chapter 2

Daily Routine

805 There are few clocks in central Taira. Except for the township office,
512 post office, and village store, only two or three families own a timepiece. Twice a day, at noon and 10 o'clock in the evening, a clerk strikes

512 461 [855] [962] care of an older sibling or the kindergarten teacher, therefore has a chance to see the mother. Men and women who have gone to the mountains return with their first load of wood around 10 o'clock. The mother will return again around noon and prepare the midday meal: noodle soup, fried cabbage with dried shrimps, perhaps rice, and always sweet potatoes. After lunch there is a short rest period. During the hot summer months this rest extends to an hour or more, and on the hottest days people lie in their houses sleeping during the noon hours. Midday is also a time for social interaction. There is some visiting back and forth. Old people always seek each other's company, and younger ones back from the fields or forest may join them for a while.

[574]

512 [231] 512 515 Toward evening blue smoke indicates again that food is being prepared. Pigs are fed by the women in late afternoon. Then women, young girls, or boys fill water buckets and carry them home. After 5 there is a heavy run on the tank or faucets, and this is often the time when families start preparing a bath. It takes until dark to warm up an oil drum filled with water and heated underneath by scraps of wood and twigs. People take their bath after dark. Since the bath house was destroyed during the war, ablutions take place outside near the tank under a faucet or in an old oil drum in one's backyard.

512 [231] [438] Young men who return from the mountains wash their horses in the sea. The women who sell fish call on each house at this hour to peddle their wares. The village store, which has only seen a few customers in the morning and during noon, now has its busiest hour. Mothers send their children to buy noodles, kerosene, rice, or seaweed or else they come themselves, a baby on their back or the toddlers following them.

[889] This is also the hour when the young men and women gather to do joint work in the fields of their association or to play volleyball on the playground. Meanwhile, all forest workers have returned and busily cut the last pieces of firewood, bundling them before the store clerk comes along to buy the load. Some adults sit near the playground and watch the children.

512 264 Work goes on until dark. Only then do families gather for the evening meal. During the summer this may be as late as 8 o'clock. For many families this is the only time during the day when everybody gathers in the family circle. At this time family affairs may be discussed and plans made for the next day's work or other pending matters.

512 262 264 The evening meal consists of rice, a bean paste or noodle soup, and some fish. Meat is served occasionally if a goat is killed or on holidays when someone has slaughtered a pig. Most families cannot afford to buy more than small portions of meat, which are fried or made into

But actually no family is entirely self-sufficient, for each needs to purchase foodstuff as well as ready-made clothes, manufactured mostly in Japan, more substantial building materials, such as better grades of wood, tiles, and cement, tobacco, alcoholic beverages, sweets, toilet articles, some medical supplies, and other luxuries. Farmers buy their tools; students their books and writing materials. Finally, cash is needed to pay taxes.

In addition to the utilization of sugar, pineapple, firewood, and building materials for cash, Tairans also raise pigs for sale to slaughter houses, and some families derive an income from raising silkworms and producing tea. Fishermen sell fish inside and outside the village, and a small group of people are salaried workers or have an income from specialized services.

Village leaders fear dependence on rapidly dwindling forest resources, still the main source of ready cash. They realize that the present modest living conditions of all families could be much improved if Tairans concentrated on increasing the cultivation of subsistence crops and farmed more intensively to raise cash crops. Most people lack this insight, however, and live on a day-to-day basis without much thought of the future. This is an island-wide problem which has the attention of central government agencies, and a great deal of educational propaganda comes to the village through government channels.

AGRICULTURE

The productivity of the land varies not only with its quality but also with the industriousness of the owners. Farmers who show foresight, those who seem to be under less pressure for immediate cash, take off more time from forest work to cultivate fields during planting season. The village headman and council members remind everybody during village meetings and informal discussions that work in the fields should not be neglected. With the approval of the whole community, the first and 15th of each lunar month have been set aside for farming. On these two days it is forbidden to go to the forests to cut wood. Such agreements are usually observed (as a rule), and they help to achieve their purpose but are not completely effective.

Rice is planted and harvested twice a year. The first rice is prepared in January when seeds are put into special beds where they are left to grow into young shoots until March. Until about 30 years ago it was said that all people seeded rice on the same day while prayers were

2:Maretzki & Maretzki E-5 (1954-1955) 1963 AC7 Okinawa AC7
Taira

243 offered at the village shrine by the priestess. Today key agricultural
[782] events are still marked by small ceremonies in which the priestess be-
[793] seeches or thanks the gods, but the actual day for planting is determined by weather and the condition of seed.

When the rice is transplanted in March, the whole family spends long hours in the paddy. Then the paddies swarm with people; some prepare the soil by spreading fertilizer, others stand in the ooze to set
[476] the seedlings. Transplanting is done by mutual assistance groups, which will be discussed later in this chapter. They guarantee everyone a sufficient number of helping hands during the painstaking, rapid work, which has to be finished within a limited time. In a few days the whole paddy area suddenly turns from brown into the tender green of the young shoots. Once planted, intermittent weeding is all the care that is needed.

[261] In July the rice turns brown and is ready for harvest. This is an
[857] event of joy for the whole village, for young rice is most delicious and loved by everyone. By then vacations have started, so that schoolchildren can help to cut rice and carry bundles to the spot where it is threshed in treadle-type machines, located either near the field or behind one's house. As soon as the rice is threshed, the grain is carried to a place in the village where the wind blows freely. There a woman holds a flat winnowing basket filled with grain at an angle to let the
[782] breeze separate the chaff from the grain. The first rice is cut by men
[264] and offered at the family shrine before the whole family eats a specially
[251] prepared gruel. Rice is usually stored in one or two oil drums in the kitchen-side corner of the front room. Better houses have a metal-lined
[256] storeroom. Once a week a supply is taken to the miller to be hulled and polished.

Those whose fields are sufficiently wet plant a second crop, and the cycle is repeated once more in midsummer, with the second harvest falling in late December.

244 Sweet potatoes can be planted throughout the greater part of the year if the soil is not too dry. They take from five to seven months to
[262] grow to full size. Although less popular than rice, no part of the plant
[231] is wasted. The large tubers are consumed, the small ones are usually fed to the pigs; the young leaves are used as vegetables, the older ones cooked into pig food. Slips are cut and used for planting a new crop.

The preferred variety of potato (*tadushi imu*) is grown in the dry paddies during the second rice season. To plant this potato, the soil must be piled up to form a long, narrow, flat-topped mound. One of the hardest jobs for farmers, this is done by men in the humid heat of a midsummer day. Women set the slips after the earth has been moved.
[251] These potatoes are the only variety which are thought to improve with

Spindler & Spindler F-5 (1954-1955) 1963 AC7 Okinawa AC7
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storing and are kept under the house or on a special shelf on the rafters.

Onions, giant radishes, beans, and cabbages are also raised on farm lands. Night soil is rarely used for such vegetables nowadays but is still used on potatoes. Several of these vegetables as well as others are raised by women in small "home-garden" plots.

The hardest working period during the year is in July and August. Within a few weeks after the rice harvest, the soil must be made ready for the second rice crop or the soil must be prepared for dry paddy potatoes. This is also the time for planting the chief sugar crop. All this takes place during the hottest time of the year, when efficiency is greatly reduced by heat and humidity.

Sugar harvest and processing fall in the period between January and March. One field after another is harvested by the owners after arrangements have been made for a date when the cane can be processed. Such arrangements are made with the director of the Taira cooperative, who supervises operations of the sugar mill which is owned by the cooperative. The whole family helps on the day of processing. Women carry bundles of branches and light firewood to heat the kettles. The operation requires the help of someone to feed cane into the small, diesel engine driven press, some to carry the pulp away, and others to watch the kettles in which extracted juice is boiled down to molasses. Finally, a few persons stir the brown residue in wide, open pots until it becomes stalted. Then it is put into tubs that hold about 132 pounds.

The agricultural market for cash crops was totally disrupted at the end of World War II. There was no immediate outlet for sugar products; crops had been destroyed or neglected, and the sugar mill was demolished in the fighting. But by this time most people were too satisfied with the great returns from forest work to invest much time and energy in a crop which takes a year and a half to show any material results. Nevertheless, sugar was the first crop to find a market again.

Pineapple, introduced recently in Taira, has a promising future. Tea is still grown in small quantities, but few families grow more than they need for their own use, although it is a good potential cash crop for this area.

ANIMAL HUSBANDRY

Raising pigs is an important source of cash income for all households in the village. Even the poorest families own at least one, but few families have more than two; in the central village the average is about 1.2 per household. Pigs are given special care and attention.

231 Before a piglet is bought, its feeding habits are carefully observed by the buyer to determine future growing potential. It is then kept in a sty: pigsties are either in the yard near the house or in a cluster of stables on the north edge of the town. Twice a day women cook the food in large kettles and ladle the liquid food into a trough. Nowadays pork is rarely consumed in the village except for special holidays, when several families may slaughter pigs and sell part of the meat to everybody through the local store or preserve some of it by salting. Most farmers, however, wait for the meat buyer from the southern part of the island from whom they receive a good financial return.

Goats are raised for home consumption. They are never left to graze but are quartered in a goat pen near the pigsty and fed on grass cut from uncultivated land. Seven families in the central village have horses. Their main use is to carry firewood from the mountains. The small breed looks like a cross between a horse and pony and seems especially adapted to climb the steep trails. They are also used for plowing and for pulling two-wheeled carts. The owner of a horse may more than double his income from forest work. Horses are frequently rented out for half the day's income from wood carried by them.

Silkworm raising, an important source of income in Taira before the war, is only now being resumed by some Tairan families. The larvae are supplied through island-wide silkworm raising associations, which repurchase the cocoons after they are spun. To raise silkworms, a substantial house is needed so that rats cannot enter and eat the worms. The temporary postwar structures with holes and cracks in the walls and roof are inadequate. Only a few recently built houses can be used. One family keeps growing worms on shelves in the front room. Most of the mulberry trees were lost during and after the war. Plans have been made to plant new trees. Young girls feed the mulberry leaves to the gluttonous worms who require constant attention. When the worms are ready to create their cocoons, they are taken off their diet, and the cocoons are cleaned and sorted out. Silkworms can be raised four times a year if there is an adequate supply of mulberry leaves. Their sale brings a good income, which can become a substitute for cash earned in forest work.

FISHING

226 Fishing is a much less important source of livelihood than one would expect in a coastal village and is a low-prestige occupation. Only two

2:Maretzki & Maretzki E-5 (1954-1955) 1963 AC7 Okinawa AC7
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quire room and board are sometimes put up without compensation, and they agree, perhaps, to give some help with studies of the landlord's children. Only the village "doctor" takes transient guests, mostly visiting officials from the city, who pay for lodgings.

Although the household head is a legal owner of the family property, there is a feeling that it belongs to the family and everyone in the household identifies himself with his land and house. This is expressed in the language. A person who is asked, "Whose rice paddy is this?" would answer that it is the household's or "ours."

In addition to the communal land holdings and the property of the cooperative described earlier, the following items are shared. The government supplies a breeding boar to each village; it is then left in the care of one farmer. This animal is available to pig owners for studding on request, and a small charge is made for the upkeep of the boar. A few tools are jointly owned by several households. Threshing machines were bought jointly after the war by two or more families to defray the high cost of such equipment. These families could be neighbors or relatives. Today many are complaining that joint ownership works hardships during the busy harvest season when there is heavy demand for the machines. As a result, everybody wishes to own his own machine as soon as he can afford to. For tea harvesting, special clippers are owned by the village cooperative and loaned to people as they need them. Since tea harvesting, though seasonal, is not done by all families during the same day, sharing of these tools presents no difficulties.

Property of others is very much respected. Stealing among villagers is almost unheard of, except for some pilfering of green vegetables and fruits by children. Only one case was reported during the field-work period—a person tried to take some goods without payment from the community store. When a village meeting was called, and it was announced that the person's identity was known to the store manager, the merchandise was later replaced. Willful damage to fields is similarly strictly forbidden. No child would really think of doing such damage. But there are no formal rules about trespassing. Movement across other people's property is completely free and unchallenged.

2:Maretzki & Maretzki E-5 (1954-1955) 1963 AC7 Okinawa AC7
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financier, the abacus a mathematician, the book a scholar, and food a glutton. The villagers did not seem to place much credence in the choice. Mothers laughed when asked what choices their children made and commented, "It's something to talk about, but many times we can't even remember which child chose what!"

The child continues to be carried on the back until the next sibling is born, the interval being between about two or three years. By the time an infant is a year old, he has been taken through every nook and cranny of the village. He has also seen all the adults and children of the village and has witnessed the economic and social-ceremonial activities. Whereas he slept most of the time when he was young, he now begins to participate in what goes on about him. He claps his hands in glee in response to his older sibling's delight over some aspect of play or raises his arm in defiance of another child who attempts to strike at his older sibling. In spite of the fact that he is capable of crawling or learning to walk within the second half year of his life, he is kept on the back. He does not protest or clamor to be put down; he seems to prefer being carried to being left to crawl.

Caretakers are too busy with work or play to let the child crawl about freely, so there is no crawling stage in Taira. Older siblings are too involved in play to sit and patiently watch a crawler. The older child would also be severely punished should the infant pick up some object and swallow it or injure himself in his crawling. One 8-year-old found that the 10-month-old sister she toted on her back took to standing on the ground and jouncing up and down every time she squatted to play. After several unsuccessful attempts to stop this annoying behavior, she unstrapped her and allowed her to crawl about freely. The older girl became so engrossed in the game that her mouth dropped open and eyes turned round with fear when one of her playmates shouted, "Hey! the baby put some dirt into her mouth!" Immediately she rushed to "flush" the baby's mouth out with her fingers and promptly strapped her onto the back again and continued playing despite the uncomfortable jouncings. The baby did not protest at being restrapped; she just jounced and played with her hands.

A mother who sits and plucks sweet potato leaves off the vines for hog feed works more efficiently with the baby on her back. Crawling around on the loose floorboards near the fire pit or over the edge of the raised floor, the child would require constant attention. On one occasion the observer was sitting and talking with a mother who was weaving a bamboo basket in her front room. The floor was littered with bamboo shavings and slats. As the mother worked, she was relaxed. She turned and twisted the sharp ends of the bamboo slats, leaving pointed

857 intimate as they used to be. He has little in common with them, but
561 since he still takes care of a younger sibling or plays games to which younger children are attracted, there remain frequent contacts between the age groups. The transition between first grade and second grade is in no way as pronounced as the drastic status change from
[866] kindergarten to first grade. Children feel it mostly as a gradually increasing pressure toward assuming more responsibility. The transition which takes place at a ritual level * during the early latency period, however, is not reflected in their daily life.

CHORES AND RESPONSIBILITY TRAINING

857 Although adults say that the elementary school student is still very
868 much of a child who only toward the latter part of this stage can seriously be expected to contribute much to the tasks and duties in home and village; the children, in fact, do some work daily. Already in first grade, responsibility is approached with seriousness, girls exceeding boys in this respect. Children beg tasks, and obeying the school's directive to "help one's parents" seems to become the prime objective of first graders who have just proudly attained their new
857 status. They plead to accompany their older siblings who, with much
868 less zeal than the younger ones, gather giant African snails after a heavy rainfall, hunt frogs, dragon flies, and grasshoppers, or wash
● 231 potatoes for the pigs. Adults consider some of these chores play.
[866] Although frogs and grasshoppers are fed to the chickens, and minnows and seaweed are added to the pig swill, nevertheless, adults would not seriously label expeditions to collect these responsible. On the other hand, if there is no available feed, as occasionally happens, the child will be scolded and berated for "thinking only of play and not of the hungry chickens." Four- to 6-year-olds are discouraged from these foraging trips, for the danger of snake bites and accidents in the paddies and on the beach is very real. Accompanied by older siblings, however, they, too, may participate.

Some tasks, such as fetching water and feeding the pigs, cutting grass for the horse and goats, washing down the horse, and gathering faggots for the hearth, are still too difficult for the first grade child. But some of them are attempted, at least by assisting older children.

866 Once the child starts off to school, he is made aware that he is

[764] * In case of death, the child who has reached the age of 8 must be given a full
[775] fledged burial since in afterlife he becomes a buddha from now on. We had no indication that children were aware of this.

866 Girls could theoretically become monitors, and several votes were cast
872 for them, but it is doubtful whether a girl could be effective among
876 boys, who might be unwilling to follow her lead.

[858] The student Red Cross chapter has a chairman in each class who
[231] makes collections under the teacher's supervision. Somebody may volunteer for such jobs as pouring milk during lunch hour. Other assignments have to do with the upkeep of a few school-owned goats, which must be fed during vacations too.

RELATIONSHIP BETWEEN BOYS AND GIRLS

858 Differential status of boys and girls, emphasized in child rearing
876 from the time of birth, is clearly defined in many details of school routine. Boys are sent out first when it is time to leave the classroom; they head the lines; and they are given first turn at the equipment.
[177] The promotion of sex equality under American supervision of the educational program has met with only mild acceptance in the classes we observed. Although separate seating is avoided under post-World War II rules, a separation continues in fact.

858 Girls remain on the receiving end of much teasing and horseplay,
876 more, it seems than one observes during associations of boys and girls
865 in the village, which we will describe later. Teachers, like parents, expect the boys to bully girls. In one classroom, for instance, we heard girls complaining that the (male) teacher favors boys by calling on them all the time. This may encourage the dominant, aggressive behavior of boys toward girls. Hardly a day passes in school without several girls crying as a result of assertive boy tyrants. Occasionally a boy is punished, but usually he escapes with distinct pride showing on his face. Recently teachers have resorted to ridiculing those who intimidate girls, but the tradition is so strong that even if bullying on the school ground is curbed, there is a great deal on the road to and from school. Only the most vociferous girls do not seem to be cowed by such boisterous demonstrations and may adequately match in verbal repartee those boys who try to put them into place as well as provoking more teasing and aggression. To illustrate attempts at bullying in the classroom, we quote from an observation record (second grade).

> . . . Whenever one of the girls gives a wrong answer, S. (Taira boy) shouts loudly; he is one of the most vociferous in class . . . Class then starts reading aloud, each pupil for himself . . . A boy in front of K. (Taira girl) turns around, hits her for putting her feet against his chair. K. continues kicking

Population Density The pattern revealed in a map of population density---Map 4---is approximately the same as that for percentage of arable land. It is somewhat complicated, however, by the urbanization that is going on in Nakagami. A more detailed discussion of the population movements responsible for this situation will be found in a later section of this report. 161

Farming Almost all of Okinawa's rural people farm, and many are engaged part time in home industries which utilize local products. Particularly noteworthy are the vegetable-producing areas. Kitanakagusuku and Ginowan 'sons' are centers of vegetable production for the American military forces.[1] The inland 'son' of Haebaru grows 53% of the gunto's tōgwā, a wax melon that is a favorite Okinawan food. 433 241 [262]

One of the most remarkable agriculturel areas, Tomigusuku, lies south of the Naha-Mawashi-Oroku urban complex. It grows many kinds of vegetables for the cities, and ranks high in other production. Tomigusuku stands first in the gunto in acreage of green beans, muskmelons, bananas and eggplant. Almost one-fifth of the latter comes from here. It ranks second in tomatoes, and ties with Yonagusuku for second place in weight of mat reeds produced. Miwa, in the far south, leads the gunto in soybean acreage, while Nishihara occupies a similar position in acreage planted to pumpkins.

The most remarkable 'son' in northern Okinawa is Nakijin on the north shore of Motobu peninsula. It leads in gunto acreage of sweet potatoes, leaf tobacco (75.2%), and cucumbers. In animals it leads in numbers of pigs and ducks. It also produces 76% of the banana cloth, or 'bashōfu', of the gunto. This 'son' is mainland Okinawa's chief wheat producer. [231] [235]

The small Okinawan acreage of Irish potatoes is found in Ōgimi-son to the northeast. Yabu is noted for its pickled giant radishes, or 'takuan'. The offshore islands lead in certain special crops. Minami Daitō leads in sugar cane, wheat and barley. Ie Shima seconds in barley, and Izena seconds in wheat. Ie Shima is far ahead in acreage of Irish beans, or 'azuki', accounting for 41% of the gunto's planted acreage of this crop. Though Ie Shima ranks only 15th in soybean acreage, it produces almost a fifth (18.4%) of the gunto's 'miso', in which soybeans are used as a base. 'Miso' making is one of the main home industries on the island. Ie Shima, Kamimotobu and Nakijin retain some of the old 'awa' (German millet) complex, between them accounting for over a third (34.3%) of the acreage of that crop in Okinawa gunto. Kamimotobu is mainland Okinawa's leader in acreage planted to ordinary millet ('kibi'; Panicum miliceum). [252]

Nakagami has little of agricultural distinction. Yomitan leads the mainland in acres of barley and number of rabbits. Gushikawa is second rank in sweet potato acreage, but produces about two-fifths (39.4%) of the gunto's sweet potato starch. It leads in numbers of goats, and is second though not outstanding in numbers of bullocks. [231]

[1] Most of this and following paragraphs derive from Ryūkyū tōkei hōkoku and Okinawa guntō no tembō. Some is based on personal observation and interviewing. [127]

313 Home Industries and Famous Products The forested northern mountains give rise
314 to small scale lumbering, charcoal making,
433 and firewood gathering. Kunigami-son and Kushi-son emphasize the gathering of
bamboo and firewood. On the other hand the making of charcoal is more important in Nago, Haneji, and Ōgimi. The urbanization of the south combined with
[369] the postwar extension of roads into formerly inaccessible parts of the north
[391] have accelerated exploitation of the northern forest resource. Particularly heavy is the demand for long roof poles, or kichigwā, after every major typhoon.
[237] Kunigami-son and Higashi supply the bulk of these. Where wood is plentiful behind a coastal road, one often finds lime kilns, which process the coral of the reefs.

258 The sea is also a major source of material for home industries. Sea
433 salt is made at Yagaji, Urasoe and Oroku on the west coast, at Henza and Awase
[237] on the east. Kunigami-son prides itself upon its production of seaweed. Buttons from seashells are made in Mawashi. Fish cakes ('kamaboko') are made in quantity in Itoman and Naha, with lesser amounts being produced in Ishikawa and Nago. Dried bonito ('katsuoboshi') is a specialty of Tonaki isle to the west. Motobu-chō holds second place, followed by the western isles of Tokashiki and
505 Zamami. For over a hundred years the small cargo sailboats ('Yambaru-sen')
178 of the east coast have carried forest products from the north. The extension of roads into the northern forests has greatly reduced the amount now carried by sea.

433 Horse breeding is a specialty in Nakazato (the eastern half of Kume-
[232] shima), which has 22% of the gunto's production of horses. However, the pro-
[233] duction of horse and cattle hides is concentrated in the urban areas, which
account for 84% of the hides produced. Nakazato is also famous for production
[231] of silk cocoons, being responsible for about two-fifths (38.7%) of the gunto's total. The leading mainland producer is Motobu-chō, with 9%.

Although Okinawa is not self-sufficient in tea, the three areas of
[245] Oushikawa, Ishikawa and Kunigami produce over half of the local tea. In Oku
[474] village of Kunigami, the tea factory is a cooperative venture. Oushikawa
[374] and Chatan pride themselves upon possessing 'sake' and 'awamori' distilleries.
[236] Mawashi is the center of production of farm tools, and accounts for some weaving of banana cloth. Weaving of mats from the "seven isles reed" ('shichitō-i') is a local specialty of Kanegusuku.

[314] Travertine quarries are found in Motobu-chō and Katsuren. A sandy limestone is quarried at Minatogawa in Oushichan.

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[177] Many root plants such as the giant radish and carrots used to flower out, and the root would be so stringy that it could not be eaten. About nine years before the war the Japanese brought in many new and better varieties. Nanahan has more vegetables now than the rest of Tomoyose, people say, "...because our houses are scattered and we can get to the vegetable plots easily; they in Tomoyose can't, and therefore pay less attention to vegetables." Of [231] the seven wards of Tomoyose, only Nanahan has an agreement not to keep chickens so that their vegetables will be protected. Before the war the Irish leek and swiss chard were the only abundant vegetables; others were to be had in only small quantities. The "pine mushroom", or 'metsudake', was gathered "when we used to have pines in the neighborhood." Farmers complain that they can grow less green peas now, because of the great increase in number of rats due to loss of the cat population during the invasion.

Okinawa has always been self-sufficient in sweet potatoes except in occasional time of famine. Even then, dried products of the sweet potato are often used. Many varieties are grown the year around, but in Nanahan only five main varieties were mentioned. Okinawa #100 gives the biggest harvest and in fairly fixed amounts regardless of weather. There were many of White #100 before the war, but few now. It was delicious, but the harvest gradually declined from its former high yield. Just after the war there were many of the tumaikuru variety, but recently few have been planted. The yield had been high, but gradually the seed became bad; it was described as the "most delicious of all sweet potatoes." Yaeyamaakagu was mentioned as a variety still grown in small amounts. The variety which brings the highest market price is Kiirumugwā. This "delicious" potato yields only half that of the average, and hence its price is double.

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433 Perhaps the best way to view the prewar-postwar change in agriculture is to look at the amounts grown by a typical Nanahan farmer. Table I below presents this information.

Table I

Crop	Tsubo Prewar	Tsubo Postwar	Comments
Sugar cane			Postwar home use amounts to 14-15 'kin' (19-20 lb.) annually. Sells about 100 'kin' (132 lb.). Prewar, sold 1400-1500 'kin' yearly.
(summer planting)	500	350	
(spring planting)	300	150	
Sweet potatoes	700	500	Three harvests per year. Not sold much; make starch only if harvest is plentiful.
Soybeans	300	200	Generally sold about 1/3 of each prewar crop, but only when money was needed at home.
Broad beans	150	70	Prewar variety was a small plant, the postwar one very large.

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Table I, Cont'd.

Crop	Tsubo Prewar	Tsubo Postwar	Comments
Green peas	80	--	None now due to rats.
Giant radish	50	50	Sell half; use the rest in soups.
Burdock root	--	50	Sell 90%; use only at home for feasts.
Carrots	1	5	Sell half the crop.
Dryland taro	--	20	
Irish potatoes	--	50	Winter crop; seed from Hokkaido.
Cucumbers	1-2	50	Prewar, all used at home. Now sell 90% at about ¥10 per 'kin'.
Chives	1	1	Always use in soup. Raise for home use only.
Wax melon	50	50	Sold half in Itoman prewar; now sell same amount in Naha.
Pumpkins	1	1	Entirely for home use then and now.
Kidney beans	100	100	Then and now entirely for home use, in 'gohan' and 'miso'.
Cabbage	--	60	Sell 90% at ¥2-7 per 'kin'.
Eggplant	--	4-5 stalks	For occasional home use.
Green onion	--	10	Entirely for home use, in soups, etc.
Chinese cabbage	--	20	Sell over two-thirds.
Bitter melon	--	5	Mainly for home use.
Mustard cabbage	--	3	Sell half. Pickle temporarily with salt for home use. [251]
Swiss chard	5	50	Pigs eat the old and large leaves; people the young and tender small ones. [231]
Garlic	--	3	It is pickled, and is entirely for home use. [251]
Shallot	--	2	Entirely for home use.
Red peppers	--	1-2 stalks	Used with soybean curd, or when one has a stomach ache. [759]

It apparently did not find
178 widespread use in Tomoyose, for that village passed almost directly from the use
243 of bamboo tongs to the rotary thresher, or 'dakkokki' (see photo). Yamada first
412 saw this thresher about 1933, but Nanahan farmers began using it only in 1941.
[407]

178 Hulling of grain was in the past accomplished---as needed for home use
252 or sale---by using a wooden rotary mill (see photos) called fichiūshi in Yamada and shiriūshi in Nanahan. In Yamada two women sat with their feet braced against it, and pulled straw ropes alternately. In Nanahan men did the hulling, and the rotary mill was lower but was three feet in diameter. In the late thirties motor-powered hulling mills were built in many areas, and farmers took their rice there for hulling and polishing.

Polishing of brown rice in Nanahan was accomplished until about 1935 by use of a mortar, or chichiūshi (see photo), and pestle, or ajin. Most families still have these in reserve, as they were used after the war and were replaced by rice mills only after 1949. People in remote areas still use them exclusively. Nowadays people have their rice hulled and polished in one operation at a rice mill, if it is close at hand.

178 Very little wheat was grown in the three farm villages studied, but
246 it was noticed that on the outer isles wheat was more dominant. On Henza isle, removal of the grain from the sheaf and hull was accomplished by rubbing it upon a piece of bumpy limestone. On Kudaka, separation was by rubbing on a canvas, both with the hands and feet.

178 After the war farmers took advantage of the spread of the lantana bush,
241 which had flourished due to the neglect of the land. It furnished an excellent livestock feed, and also a short pole which they could use in roofing their re-
[342] built houses. Such poles, or kichigwā, had formerly been brought down from the forested north country.

178 Chronology of Change in Livestock Recovery of the land after the war pro-
727 ceeded far more rapidly than replacement
231 of the livestock killed or eaten in the invasion. The following table illustrates the loss and slow recovery (except for swine) in livestock numbers:

Table V

Type of Livestock	1940[1]	1946[2]	1952[3]	1952 as % of 1940
Cattle	22,000	112	6,837	31.0%
Horses	25,000	899	5,110	20.4%
Swine	108,426	1,165	107,077	98.8%
Goats	106,257	1,647	58,472	55.1%

In Kachinda-son the story has been somewhat the same, with the exception that there are many more swine and cattle now than in the thirties. This is due partly to the lesser amount of land in sugar and the planting of more

1, 2 Summation....July-November, 1946, p. 26.

3 Ryūkyū tōkei hōkoku, Vol. 3, No. 3, 1943, p. 1. Valid as of 31 Dec. 1952.

swiss chard for pig feed, as well as the greater availability of lantana bushes for livestock feed. The following table compares the 1931 figures with those for 1952: 178 727 231

Table VI

Livestock Type	1931	1952	1952 as % of 1931
Cattle	41	229	558.0%
Horses	1,676	74	4.4%
Swine	1,774	2,490	140.0%
Goats	4,217	1,400	33.3%

The "great rabbit boom" is often spoken of by farmers in an amusing vein. In the winter of 1946-1947 rabbits assumed the form of currency, and in a mad fever people bought rabbits and sold them, never realizing their true value. A Nanahan farmer related: 175 231 [43]

> I hitched a ride on a truck, and went up to the Katchin peninsula. There I bought a rabbit for ¥600. I sold it the next day to B. for ¥1200. He resold it for ¥700 profit to a Gisshi farmer who was waiting to buy one. Then I went up again, stayed overnight, and sold the new rabbit for ¥1000 profit. Again and again I went, and finally amassed ¥5000 in profits. With these rabbit profits I bought what I thought was a pregnant goat for ¥7000. It wasn't pregnant, and I had to sell it for ¥3000, taking a loss. But then I bought a pig from B. for ¥2500 and sold it to 'One-armed K' for ¥3000.
>
> In Tsukazan, which was the center of the rabbit trade in this area, a man sold all of his land to invest in rabbits, but he lost everything on the deal.

2. Land Use

The basic pattern of land use has been described in Glacken's Okinawan Village Studies (SIRI Report No. 4), and in Nuttonson, Ecological Crop Geography and Field Practices of the Ryukyu Islands, Natural Vegetation of the Ryukyus, and Agro-Climatic Analogues in the Northern Hemisphere. Although agriculture is not quite as intensive nor yields so high as in Japan, still much intercropping, double-cropped and rotation of crops is carried on. Because sugar cane takes a year or more to mature, various crops such as kidney beans, giant radish, cucumbers, broad beans, soy beans and mustard cabbage are interplanted with the cane. They mature and are harvested before the cane grows too tall and cuts off the sunlight. Sugar cane is rotated in a two-crop cycle of cane and sweet potatoes; or it is rotated with soybeans and sweet potato in a three-crop cycle. Very rarely is cane replanted in a field which has just produced a crop. In this way the farmers hope to diminish the damage done by worms and insects. 311 241

262 Sea food eaten differs by the season. Most available in summer are bonito and the sea turtle. Common in October and later are seabream, whitefish, and globefish. Canned mackerel is by far the most common fish food eaten, and seaweed is a staple in all but the poorest homes. Though every [825] adult in the village speaks Okinawan by preference in everyday life, even the old people rarely know the dialect names for various fish, "because we are so far from the sea." The nearest coast is less than three airline miles away. Before the war most of the fish consumed was bought in Itoman, but with the removal of the railroad and the orientation of bus traffic toward Naha, very little is purchased in Itoman.

252 The entire day's supply of sweet potatoes, for man and beast, is prepared by boiling in early morning in a large pot. It takes about an hour to boil fifty pounds. Those for human consumption are placed on top, with those for the animals underlying them. Naturally those eaten by the pigs and other [231] animals are the less beautiful, and often slightly rotten ones. When the family eats 'imo', they peel off both the outer and inner skins and give them to the animals. They realize that the inner skin contains vitamins, but it is too much trouble to peel separately. People regard baked 'imo' as more delicious than boiled, but do not make them in Nanahan as a rule due to shortage of fuel. The children often stick 'imo' right into the fire while their mothers are boiling 'imo' for the day. Sometimes children under ten [857] years of age make baked 'imo' when they collect trash and burn it. When they do this is not determined, but occurs as the children suddenly decide there is enough trash to burn.

262 252 'O-kazu' (Okinawan: katimun) refers in Nanahan to any dish whose basic ingredients are lard, soy sauce, and 'aji-no-moto' (monosodium glutamate). It is generally made about two times a week. First lard is put in a pan. Then either raw 'daikon' or 'sengei' (dried and shredded 'daikon') is added, together with globe onions. Soy sauce is then added, and the mixture salted to taste. If meat is available, it is put in as soon as the lard is melted. 'Aji-no-moto' is added just before serving.

252 The making of 'miso' paste is a home task for the women and girls. The amount made depends on the weather. Good weather for proper mildewing is generally found in the spring and autumn. At the equinoxes, when most of the 'miso' is made if people have a choice in the matter, mildewing takes two or three days. The process involves two steps---the making of malt ('kōji') and the making of soybean flour or paste. For malt one must use broad beans, wheat or barley, kidney beans or, infrequently, soybeans. The malt materials are boiled until the skins come off. Then they are drained, spread out on a straw mat inside the house, and dusted with wheat flour. Rice straw is spread over the mixture to form a hotbed. When the mildew starts the mixture turns yellow, and is then spread out to dry in the sun. When dry it is stored in a box, to be mixed with soybean flour or paste later. The latter is very easily made. Boiled soybeans are ground up in a meat grinder, and dried. The flour may be stored separately, but it is most often mixed immediately with an [251] equal amount of malt. To prevent spoiling, about three parts salt are added to ten of the mixture, now called 'miso'. It is put into a pot for "ripening" during the next six months, and then is used gradually. If stored longer than one year it loses its taste.

'Miso' is used not only in soups, but as a flavoring for other dishes. 262 252
Jūshiimē is rice fried in oil and 'miso', with green onions added. Tōfu-champuru is made by putting shredded bonito and hot lard in a pan, adding a little 'miso' and some soysauce, and one-inch cubes of bean curd, or 'tōfu'. 'Tōfu' was eaten about every three days in Nanahan before the war, and every day about twenty peddlers from Tsukazan went through the countryside selling it. It is eaten not oftener than once a month now.

A strong rice drink, 'awamori', is in evidence at all parties. It is 273
sometimes diluted with orange soda, but more often it is served full-strength flavored with either garlic or red peppers. Before the war the refuse from [231]
making 'awamori', called kashijii, was very cheap---about two gallons could be had for fifteen sen---and was generally fed to pigs. However, it also fur- [57]
nished the base for kashijē-ēi, made by pouring hot water on half-boiled spinach or swiss chard, and adding the liquid from the refuse. It was said to have been very good for the stomach.

Feast Foods When a person reaches the age of 61, 73, or 85, a celebration 262
known as tushibii is held. This is the occasion for a feast of 574
whatever proportions the extended family's budget can afford. In the spring [561]
of 1954 a Nanahan lady who was a member of the dominant family reached seventy-three. The following was served at the feast:

--Paddy taro boiled in sugar syrup
--Soup containing 'konnyaku', pork, tripe, goat meat and ginger
--Giant radish and carrots, shredded in vinegar
--Several slices of fried bean curd
--Fish cake
--Deep-fried sugar batter
--A dish of 'konnyaku', 'daikon', pork and shredded radish
--Deep-fried whale tripe in peanut butter sauce
--Red rice; noodle soup
--Fried bean curd and pork, with seaweed

In addition, guests were given two boxes to take home, which contained the following:

--Two pieces of pork
--1 piece fried bean curd
--Two pieces of fish, deep-fried in batter
--1 piece of pork heart
--Two pieces of fish cake
--A red-dyed hard-boiled egg
--Two pieces of burdock root, deep-fried in batter
--Two pieces of sweet pound cake
--Two pieces of kujimuchi (a rice cake)
--Two large pieces of deep fried sugar batter
--One deep-fried flour dumpling
--Five cakes of baked rice flour, in shapes of the pine, bamboo, plum, crane and tortoise---symbols of longevity.

Although animals are generally bought for prices that the community considers as relatively fixed (see below), meat animals sell for a certain rate per unit weight that varies with the market. Old cows and bullocks are generally sold for meat at the rate of ¥60 per kin. Boars, if fat, are sold for ¥42 per kin. Male goats bring ¥20 per kin for eating purposes, and chickens bring about ¥200 per kin. Females of any animals are very seldom sold unless old and almost dying, or unless the farmer finds himself in dire monetary emergency. Nanahan, which has the greatest vegetable acreage in Tomoyose village, has a 'han'-wide agreement not to raise chickens, due to their possible destruction of young plants. 435

Buying of Livestock and Daily Necessities The war depleted most of the livestock of Okinawa, and recovery has been slow. Okinawan farmers frequently expressed their gratitude to the American religious organizations which sent goats to them to help in reconstruction. 727 231 [177]

The reversion of Amami indirectly helped to increase the livestock on Okinawa. A Nanahan farmer described the situation in late November of 1953: 439 231

> Horses, cows, goats and pigs, together with household furniture come into Tomari port from Amami every day. The Amamians want to get as much Okinawan yen as possible, because it will convert to Japanese yen at three to one, and they think they will be ahead. The accelerated cattle movement started right after reversion intentions were announced. We are very glad to be able to buy the animals, but important people on Amami are afraid that this movement will deplete the island of animals, especially stud horses and bulls, goats and pigs for breeding.

Nanahan farmers have relatively fixed ideas on the prices of livestock. For middle grade, or average, stock the following prices are quoted: horses, ¥13,000; cows, ¥25,000; heifers, ¥10-11,000; calves ¥9-10,000; boars, ¥2,500; sows, ¥2,700; and all goats, ¥300-400. 435

Before the war there were many people traveling through the countryside selling 'miso' paste and bean curd. Every other day such peddlers would visit even the most isolated settlements. Better roads and increased communications by bus and jitney have oriented purchase of staples urbanward. The only peddlers who now come through Nanahan are basket peddlers. Two small stores in the main settlement provide 'sake', noodles, matches and other small-cost items that are not worth a trip to town. 438 178 443

Sale of Services Farm labor is drawn from the southern islands and from poorer families who are just getting a start in the community. In Nanahan there was only one full-time farm laborer, who was paid ¥2,000 a month, in addition to room and board. He had left Miyako when eighteen, two years before, because of a famine that was being caused by a sweet-potato virus. His employer was a man who managed a good deal of land---indeed the land that belonged to himself and two minor relatives---and sorely needed the extra labor. Another landowner was converting dry land to paddy, and after 464 [465]

war level. This is due to several factors. The local prices for reed products are said to be too low, and access to Japanese markets is difficult today due to the separation of Okinawa and Japan. Since the war local food shortages and changed tastes and diet have influenced change to greater rice production. Many houses in Kanegusuku lost their mat-weaving looms during the war, depriving them of this means of support. In addition, there is some feeling that it is too time-consuming and the young girls do not like it. 286 433 178

One tsubo produces about two bundles of reed, which is worth about ¥10 a bundle when dried. Usually the reed is not sold, but is made by the producer's family into mats. Two bundles of reeds make one 'goza' mat, which sells for ¥65-100 in Naha. One person can make about two of these mats in one day. However, in almost all families this is part-time work, the woman of the house weaving in her spare time. One family in the village fortunate enough to own two looms employs two village girls full time as long as a supply of reeds is available. 286 433 [435] [464]

The covering for the 'tatami' mat is called 'tatami omote'. An individual can make about six of these per day. They are faster-made than 'goza' because the ends do not have to be tied off and bordered. These sell for about ¥45 in Naha, which place people prefer to Itoman as a market for their reed products. However, rice straw to be used in the base of 'tatami' is sold in Itoman because the cost of transporting the bulky straw to Naha would be prohibitive---it is sold for only ¥1 or ¥2 per bundle. The Agricultural Cooperative is trying to arrange for the sale of 'tatami omote' in Kagoshima where ¥85 per mat can be obtained. The first such postwar collection and sale was made early in 1954. 286 433 435

Prewar Home Industry in Yamada Before the war people in Yamada made much of their own clothing, and were self-sufficient in most of the tools they used. Most of the clothing was made by the women of the village themselves. Most women wove, and many wove constantly when not in the fields. Many had their own looms, but those who did not borrowed looms from their neighbors. 294 [286]

The usual summer garment was a kimono of banana-fiber cloth and the usual winter garment one of cotton. The former was made wholly at home, from the tree to the finished garment. For the cotton kimono the threads were purchased, usually at Kadena, already dyed, and the cloth woven at home. [291]

Several families had silkworms. They got the eggs from Japan and fed the worms on mulberry leaves they grew in their yards. These women spun and wove at home but they sometimes had professional dyers at Kadena or Naha dye the threads for them. Silk garments, like store-bought garments, were only for grand occasions. 231 283 292

Before the war some Yamada women made "panama" hats in their homes as piecework for a hat company. The company furnished the materials and bought the finished product. This was one of the few sources of cash available outside the sugar crop. Baskets, carrying bags, and raincapes made of 294 [434]

Baskets, carrying bags, and raincapes made of
294 fiber from the trunk of the chigu palm, raincapes from the excess rice straw,
[285] and hats made from the leaf of the kuba palm completed the list of major items made at home.

291 Postwar Home Industry in Yamada Before the war many---probably most---Yamada
178 people had never worn Western-style clothing.
177 The few school teachers and a man who worked at the 'son' office were probably the only exceptions. Some of the young men who went to Naichi to work acquired Western clothing there, but the older men and women continued to wear kimono. During the invasion, houses, looms, and other equipment---and much of the clothing---of the people of Yamada were destroyed. At Ishikawa and elsewhere after the battle they received cast-off army clothing. For a time they wore only this and what little they had salvaged from the battle. At present they have supplemented this with Japanese and American-made civilian clothing
[286] in Western types. Probably no one in Yamada weaves cloth today. Only one
• [231] cloth loom was located in the whole village, and this had been put away. No one raises silkworms.

178 Basketry is still made, but only for local use. Raincoats of straw
[285] and palm bark are not made in Yamada, but a few are brought in from the north.
[294] However, the army poncho has in part replaced this garment. The kubagasa, the
[291] hat made from the kuba palm leaf, is still made and worn in Yamada, but probably not as much as before the war. A variety of store-bought hats, including sun-helmets, are worn by the younger men.

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Canvas acquired

The yard in which the Okinawan home stands is also rather uniform in its appearance. It is usually surrounded by a stone wall or a thick hedge for protection against winds. Inside the gate is a himpung, a short wall that prevents one from looking straight through the gate into the house. The space between the himpung and the house is hard earth; this is where mats are spread for drying grain and where many other household tasks are performed. This yard space may be lined on one or both sides with outbuildings for the storage of tools and crops and for housing livestock---two or three goats, and here and there an ox or a horse. Behind the house is a pigsty. There may also be a chicken-coop, but chickens often run loose. There are usually a few trees in the yard, often a clump of bananas. Behind the house is also the toilet; formerly it was combined with the pigsty, but now it is usually an oil-drum. In many villages every house has its own well, but even where wells are fewer there is almost sure to be a cistern beside the house to catch rain-water. The house and yard will be discussed again later in relation to sanitation and health (see Chapter IX).[1]

The social unit that occupies such a house and yard is the family. The structure of the family is also dealt with in detail by Pitts in Chapter VII. Let it suffice to say here that ideally the first son stays with his parents after his marriage while younger sons establish separate households. Thus the family consists of a couple and their unmarried children or a couple with a married first son, his wife and children, and his unmarried brothers and sisters. The deaths of one or more members may reduce the family without breaking it up. Two married couples, parents and grandparents of the youngest generation, is the usual maximum. If two married sons live under the same roof it is usually regarded as a temporary expedient. Thus while the total number of persons in the household may be as many as a dozen, the average number is a little less than five.

The family, that is, the members of the household, is an economic unit, a social unit, and a ceremonial unit. As an economic unit the members of a household work together, producing for and consuming from a common stock. They cooperate with other households on the basis of common interest as neighbors. They form a social unit within the "han", the "ku", and the "son", they are registered as a unit in the "koseki", and may have only one vote---cast by the head of the house---in local elections. As a ceremonial unit they form part of a numbered and graded system based on common descent.

The Structure of Kinship Relations In traditional Okinawan society, as in other societies of East Asia, the fundamental unit is the family and the basic axis within the family is a vertical one running through the male line, the father-oldest son axis.[2] The basic values that support this structure are unity and continuity. Individuals are of varying importance to the family depending on their closeness to the father-first son axis; females are less important than males; younger sons

[1] For a more detailed account of the house and yard see Glacken, 1953, Chapter 5.

[2] I have borrowed this concept from Francis L. K. Hsu, to whose writings I am indebted.

52 The general characteristics of the changed entertainment patterns
198 have been a greater reliance on entertainment provided by sources outside
621 the village---the school, radio, movies---and a sharp decline in celebrations and festivals of the sort which emphasized village participation and unity.

Health and Medicine Changes in medical practice well illustrate the
757 principle that material things find more ready acceptance than ideas in the
753 diffusion of culture; in short, Okinawans have been willing to adopt modern
177 medicine when available, but not modern medical principles. Pills, shots, surgery, dentistry, penicillin, and DDT have found acceptance, while modern scientific concepts of disease, health, and sanitation seem to have made relatively little headway. The germ theory, for example, has barely penetrated.

753 However, on talking to people of different ages one becomes aware
751 that many changes in standards of sanitation and ideas about health and dis-
177 ease actually have taken place in the last fifty years. For example, evidence of the practice of tattooing various parts of the body as a cure for certain ills is rarely seen on persons under seventy. Similarly, though many of the younger generation may appear abysmally ignorant of modern knowledge of disease, they are always less ignorant and better informed than the preceding generation. Considerable progress toward better sanitation was made under the
[364] Japanese. Formerly the Okinawan privy was built atop the pigpen, and the pig
[231] subsisted in part on human feces. Stern measures were required to force the abandonment of this practice. The Japanese also introduced monthly sanitation inspections; inoculations for babies and school children were made compulsory.
[515] Through the influence of the schools the toothbrush (usually one) became a part of every home. The Japanese also sent notable scholars into the country-
[582] side to lecture the people on the dangers of in-breeding practices, particularly kin-group endogamy.

757 Penicillin, which was introduced by the Americans, has become a pop-
177 ular treatment, achieving equality with moxacautery and cutting to let blood. It can be obtained easily at any drug shop, and every doctor, midwife, herbalist, and practitioner of any sort is prepared to administer shots. Reliance excessive even by American standards is placed on this drug. There seems, in fact, to be a fondness for shots which does not end with penicillin; hormone shots and various other injections are widely advertised. It is the opinion of the author that any type of modern medicine which cuts, punctures, or otherwise disfigures the skin will find ready acceptance; this, it is felt, is merely an extension of the tradition of acupuncture, moxacautery, tattooing, and cutting. Bettelheim states that in the 1850's the Okinawans made inquiries as to how inoculations for smallpox might be obtained.[1]

759 There is some indication that the yabu, a practitioner whose chief
178 stocks-in-trade are herbs and moxacautery, is slowly disappearing; in several communities the author was told that since the old yabu died there had been no replacement.

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[1] Bettelheim, B. J., Loochoo Mission, London, n.d., pp. 34-36.